



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/062,141	01/31/2002	Richard W. Sexton	SDP271PA	2522
1333	7590	05/18/2005	EXAMINER	
PATENT LEGAL STAFF EASTMAN KODAK COMPANY 343 STATE STREET ROCHESTER, NY 14650-2201			CHEA, THORL	
			ART UNIT	PAPER NUMBER
			1752	

DATE MAILED: 05/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

mm

Office Action Summary

Application No.

10/062,141

Applicant(s)

SEXTON, RICHARD W.

Examiner

Thorl Chea

Art Unit

1752

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 March 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11-13 and 17 is/are pending in the application.
- 4a) Of the above claim(s) 1-10 and 19-21 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 11-13 and 17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

re

DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on March 28, 2005 has been entered.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 11-18 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The specification as originally filed fails to provide support for the language conductive- release sacrificial controlled-releasable layer presented in claims 11, lines 6-7 and claim 17, lines, 7-8. The specification as originally filed fails to disclose the property of the controlled-releasable layer as "conductive" such as now being claimed. See page 4 of the specification wherein the controlled-releasable layer was chosen from photoresist or a layer that is inherently brittle in a solvent such as acetone. The layer is not conductive.

Claim Rejections - 35 USC § 103

Art Unit: 1752

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 11-13, 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lam et al (US Patent No. 4,773,971) in view of Roos (US Patent No. 4,268,610).

Lam et al discloses a mandrel of claim 8 in column 6 of Lam et al which having a glass substrate, an adhesion sheet layer and a stainless steel sheet layer. The mandrel is used in the process in producing ink jet printhead (column 2, lines 36-63; Sheet 5 of 10, Fig. 4C and Sheet 10 of 10, Fig. 8C). See also in column 3, lines 15-30 wherein the chrome layer is disclosed. Roos discloses a photoresist compositions with improved adhesion properties for used in making printing circuit board, lithographic plates, relief image plates or cylinders and for other applications in the photographic art. The invention deals with photoresist formulations with improved adhesion properties in both solvent and aqueous developable film so as to resist chemical attack and other kinds of degradation during etching, plating and other processing in any known manner. The resist formulation has many advantages such as capable of easy removal from metal surface during development, does not interfere with the plating cycle or leaching into plating bath; and enable the metal surface to be cleaned with water or weak acid or basic solution without the need for persulfate etch. See abstract and column 2, lines 39-54. It would be obvious to the worker of ordinary skill in the art at the time the invention was made would have selected an adhesion layer having property equivalent to that of adhesion layer taught in Lam such as photoresist formulation taught in Roos with an expectation of achieving a layer that

Art Unit: 1752

has improved adhesion properties in both solvent and aqueous developable film so as to resist chemical attack and other kinds of degradation during etching, and plating and , and thereby provide a mandrel as claimed. The property such as "brittle" is inherent to the layer forming by the dried resist taught in Roo.

Response to Arguments

6. Applicant's arguments filed March 28, 2005 have been fully considered but they are not persuasive for the new ground of rejection. The limitation such as "the sacrificial controlled-releasable layer provides sufficient adhesion to the substrate base to prevent the electroformed structure from delaminating from the substrate base during the electroforming processes and further provide a means to remove the electroformed structure from the substrate based without damage the electroformed structure or the substrate based, and wherein the sacrificial controlled-released layer is an organic chemical that is removed by chemical dissolving the controlled-release layer, and wherein the electroformed structure is for used in ink jet printhead" in claim 11 and the limitation "the sacrificial controlled-releasable layer provides sufficient adhesion to the substrate base to prevent the electroformed structure from delaminating from the substrate base during the electroforming processes and further provide a means to remove the electroformed structure from the substrate based without damage the electroformed structure or the substrate based, and wherein the sacrificial controlled-released layer is a brittle controlled-releasable layer that is removed from the substrate by fracturing the brittle controlled-releasable layer, and wherein the electroformed structure is for used in an ink jet printhead" in claim 17 fails to further limit the structure of the mandrel, but is related to the intended use of the mandrel in the process of forming a electrostructure which is for used in ink jet printhead. The

Art Unit: 1752

photoresist taught in Roos is capable to provide the adhesion property claimed in the present invention since it resists chemical attack and other kinds of degradation during etching, plating or other processing in any known manner (col. 1, lines 5-13; col. 2, lines 39-54).

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thorl Chea whose telephone number is (571) 272-1328. The examiner can normally be reached on 9 AM-5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia H. Kelly can be reached on (571)272-1526. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tchea *th*
May 13, 2005

Thorl Chea
Thorl Chea
Primary Examiner
Art Unit 1752